

REMARKS

Favorable reconsideration of this application is respectfully requested.

Claims 1-16 and 18-20 are pending in this application. Claims 3, 4, 6-13, 16, and 18-20 stand withdrawn from consideration. Claims 1, 2, 5, 14, and 15 were rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. patent 6,055,985 to Bae et al. (herein “Bae”) in view of U.S. patent 6,618,041 to Nishizawa. That rejection is traversed by the present response as now discussed.

Independent claim 1 is herein amended to clarify features recited therein.

Independent claim 1 now specifically recites:

graph entering means for accepting an input action to enter an injection graph having chronologically changing injecting conditions in a form of a free curve, a plurality of straight lines, a plurality of passing points, or a plurality of rectangular regions into the displayed plotting chart image on the touch panel;

The above-noted features are believed to be clear from the original specification, see for example page 23, line 15 *et seq.*

According to the features reflected in the claims as currently written, a liquid injector for injecting at least a liquid includes a touch panel that allows an operator to enter an injection protocol by entering an injection graph to a plotting chart image on the touch panel. The operator can enter the injection graph in the form of a free curve, a plurality of straight lines, a plurality of passing points, or a plurality of rectangular regions.

One benefit realized with the operation in the claimed invention is that a complex liquid injection protocol for injecting a liquid at an injecting rate that changes with time can be easily and precisely entered by an operator. Applicants submit the features clarified in the claims as written clearly distinguish over the applied art.

The outstanding rejection now cites Nishizawa to disclose a computer device including a touch panel-type display screen that can display data and accept input actions.¹

In reply to that grounds for the rejection, applicants submit Nishizawa does not disclose or suggest particularly the clarified claims feature of an input action entering an injection graph “in a form of a free curve, a plurality of straight lines, a plurality of passing points, or a plurality of rectangular regions.”

Nishizawa discloses an input device including a touch panel. The input device includes various types of keys and a display screen of touch panel type. The display screen displays a graph and value windows, as shown for example in Figures 3, 4, and 6 in Nishizawa. In Nishizawa when an operator enters data into the input device, the operator touches the value windows on the display screen. A scale then emerges on the display screen by the operator touching the value windows, and the operator can then touch an appropriate position of the scale to enter a desired value.

Thereby, Nishizawa discloses an operation in which a data input action is required by an operator to touch an appropriate position of a scale displayed on a touch panel.

The claims as written recite a different structure and operation than in Nishizawa. In the claims as written, a data input action that is required is for an operator to enter an injection graph in a form of a free curve, a plurality of straight lines, a plurality of passing points, or a plurality of rectangular regions into a displayed plotting chart image. Nishizawa does not disclose or suggest any of such ways of an operator entering an injection graph as in amended independent claim 1 as currently written.

Thereby, applicants respectfully submit independent claim 1 as currently written, and accordingly the claims dependent therefrom, patentably distinguish over Bae in view of Nishizawa.

¹ Office Action of March 26, 2009, page 3, first full paragraph.


The present response also maintains withdrawn claims 3, 4, 6-13, 16, and 18-20. Amended independent claim 1 is still believed to be generic to all those claims, and in view of the foregoing comments amended independent claim 1 is believed to be allowable. That is, each of those withdrawn claims 3, 4, 6-13, 16, and 18-20 depends either directly or indirectly on amended independent claim 1. Those claims are also herein amended to be consistent with the presently submitted amendments to independent claim 1. Thereby, at this point applicants submit reinstatement of those withdrawn claims 3, 4, 6-13, 16, and 18-20 is proper.

Thereby, applicants respectfully submit the present application is in condition for allowance with each of pending claims 1-16 and 18-20.

As no other issues are pending in this application, it is respectfully submitted that the present application is now in condition for allowance, and it is hereby respectfully requested that this case be passed to issue.

Respectfully submitted,

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